ORDER NO.AD8805088C9

Service Manual

Amplifier

Stereo Integrated Amplifier

40730

SU-V650

Color

(S) ....Silver Type	
(K) ....Black Type	



Area

Color	Area
(S)(K)	(E) ....Continental Europe.
(S)(K)	(Ei) ....Italy.
(S)(K)	(EG).........F.R.Germany.
(S)(K)	(EB).........Belgium.
(S)(K)	(EK).........United Kingdom.
(S)(K)	(EF) ....France.
(S)(K)	(EH).........Holland.
(S)(K)	(XL) ....Australia.
(S)(K)	(XA).........Asia,Latin America, Middle Near East, Africa and Oceania.
(S)(K)	(PA).........Far East PX.
(S)(K)	(PE) ....European Military.

SPECIFICATIONS

(DIN 45 500)

■ AMPLIFIER SECTION

20 Hz ~ 20 kHz continuous power output	
both channels driven	2 x 90 W (8Ω)
1 kH continuous power output	
both channels driven	2 x 140 W (4Ω)
	2 x 100 W (8Ω)
Total harmonic distortion	
rated power at 20 Hz ~ 20 kHz	0.002% (8Ω)
rated power at 1 kHz	0.005% (4Ω)
	0.0009% (8Ω)
half power at 20 Hz ~ 20 kHz	0.002% (8Ω)
half power at 1 kHz	0.002% (4Ω)
	0.0008% (8Ω)
Intermodulation distortion	
rated power at 50 Hz:7 kHz=4:1,SMPTE,8Ω	0.005%
Power bandwidth	
both channels driven,-3dB	5 Hz ~ 50 kHz (8Ω,0.03%)
Residual hum and noise	0.8 mV
Damping factor	40 (4Ω),80 (8Ω)
Input sensitivity and impedance	
PHONO MM	2.5mV/47 kΩ
MC	170 μV/220 Ω
TUNER,CD,AUX,TAPE 1/DAT	
TAPE 2/EXT	150mV/22 kΩ
PHONO maximum input voltage (IHF'66 1 kHz,RMS)	
MM	160 mV
MC	12 mV
S/N	
rated power(4Ω)	
PHONO MM	78 dB (IHF'66 : 86 dB)
MC	65 dB (IHF'66 : 68 dB)
TUNER,CD,AUX,	
TAPE 1/DAT, TAPE 2/EXT	92 dB (IHF'66 : 100 dB)
-26 dB power (4Ω)	
PHONO MM	69 dB
MC	65 dB
TUNER,CD,AUX,	
TAPE 1/DAT, TAPE 2/EXT	70 dB
50 mW power (4Ω)	
PHONO MM	62 dB
MC	61 dB
TUNER,CD,AUX,	
TAPE 1/DAT, TAPE 2/EXT	63 dB
Frequency responce	
PHONO	RIAA standard curve
	± 0.8dB(30 Hz ~ 15 kHz)
TUNER,CD,AUX,	
TAPE 1/DAT, TAPE 2/EXT	3 Hz ~ 100 kHz (-3 dB)
	+0, -0.2 dB (20 Hz ~ 20 kHz).
Tone controls	
BASS	50 Hz, +10 dB ~ -10 dB
TREBLE	20 kHz, +10 dB ~ -10 dB
Subsonic filter	20 Hz,-6 dB/oct.
Loudness control (volume at -30 dB)	50 Hz, +9 dB
Output voltage	
TAPE 1/DAT, TAPE 2/EXT REC OUT	150 mV
Channel balance, AUX 250 Hz ~ 6,300 Hz	±1 dB
Channel separation, AUX 1 kHz	50dB
Headphones output level	
and impedance	635 mV/330 Ω
Load impedance	
MAIN or REMOTE	4 Ω ~ 16 Ω
MAIN and REMOTE	8 Ω ~ 16 Ω

■ GENERAL

Power consumption	670 W
Power supply	
For United Kingdom and Australia	AC 50 Hz/60 Hz, 240 V
For continental Europe	AC 50 Hz/60 Hz,220 V
For others	AC 50 Hz/60 Hz, 110 V/127 V/220 V/240 V
Dimensions (W x H x D)	430 x 159 x 363 mm
	(16-15/16" x 6-1/4" x 14-1/4")
Weight	10.1 kg (22.2 lb.)

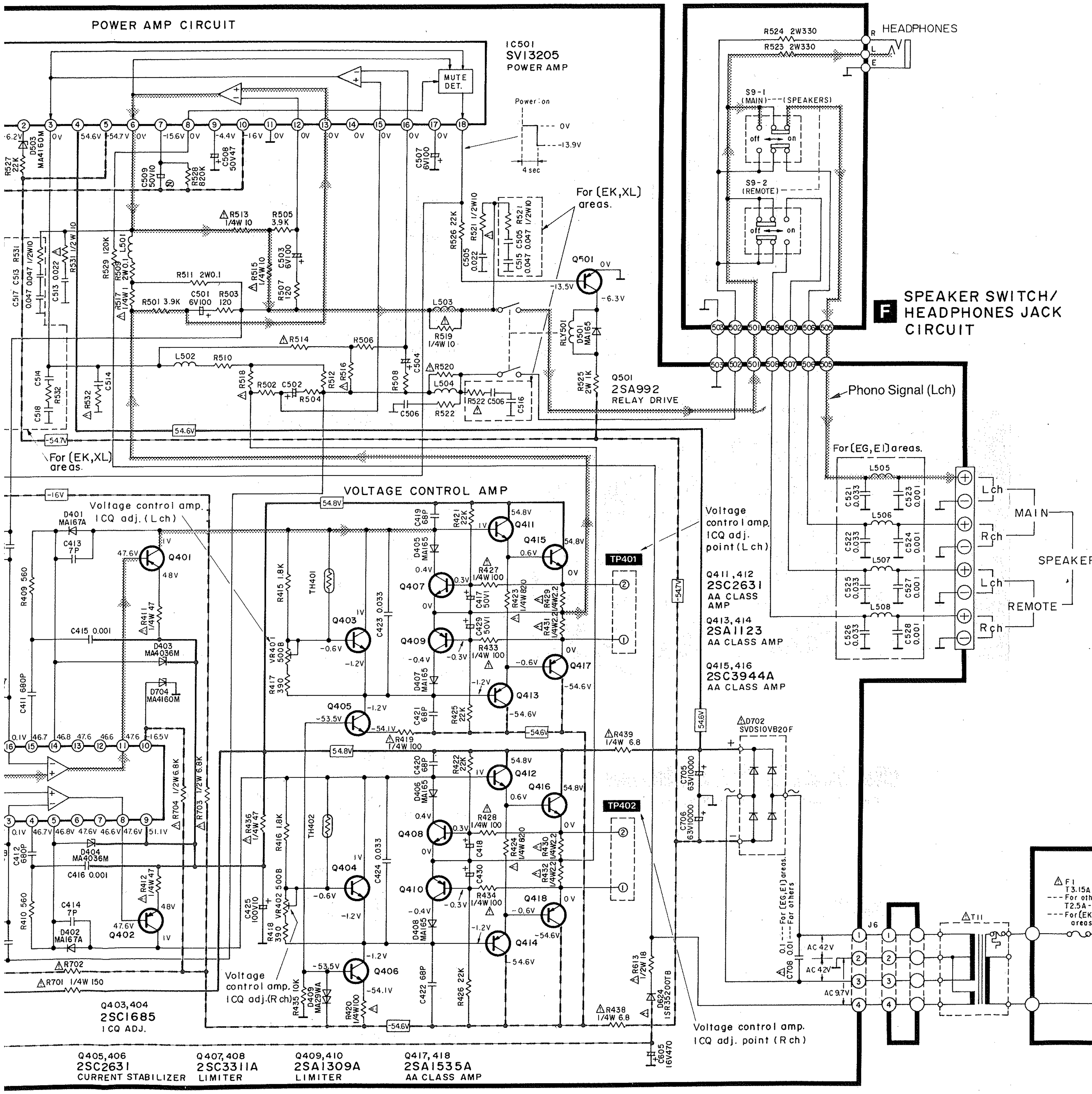
Notes:
1.Specifications are subject to change without notice. Weight and dimensions are approximate.
2.Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Technics

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(This schematic diagram may be modified at any time with the development of new technology.)



Notes:

- **S1-1～S1-6** : Input selector switches.
  [**S1-1: phono S1-2: tuner S1-3: CD**
  S1-4: aux S1-5: tape 2/ext S1-6: tape 1/DAT]
- **S3-1, S3-2** : Recording output selector switch in "**CD**" position.
- **S4** : Phono cartridge selector switch in "**MM**" position.
- **S5** : Compact disc direct-through switch in "**off**" position.
- **S6** : Loudness switch in "**off**" position.
- **S7** : Subsonic filter switch in "**off**" position.
- **S8** : Tone control switch in "**off**" position.
- **S9-1, S9-2** : Speaker selector switches.
  [**S9-1: main S9-2: remote**]
- **S11** : Power switch in "**on**" position.
- **S12** : Voltage selector switch in "**240 V**" position.
  (110 V→127 V→220 V→240 V)
  For (XA), (PA) and (PE) areas.

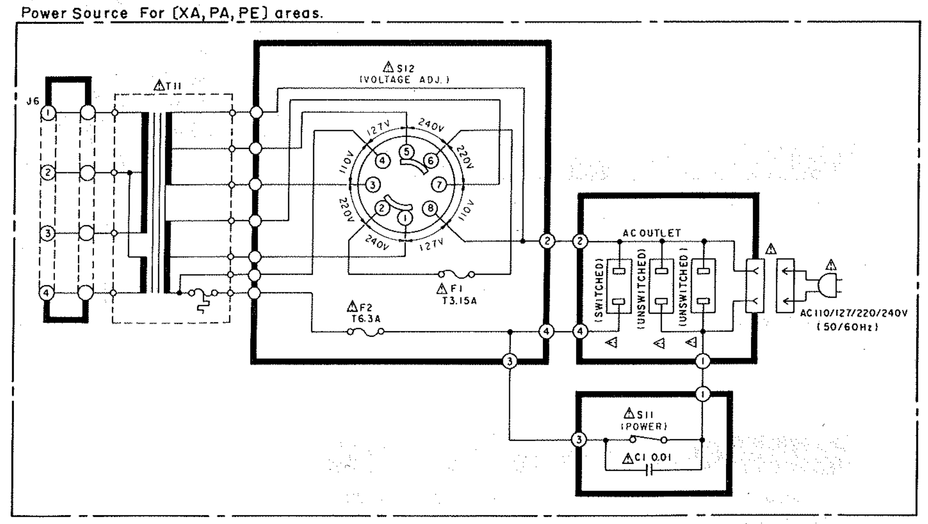
⟹ : Phono Signal (Lch)
⟹ : Recording Signal
—□— : Positive voltage lines.
--□-- : Negative voltage Lines.

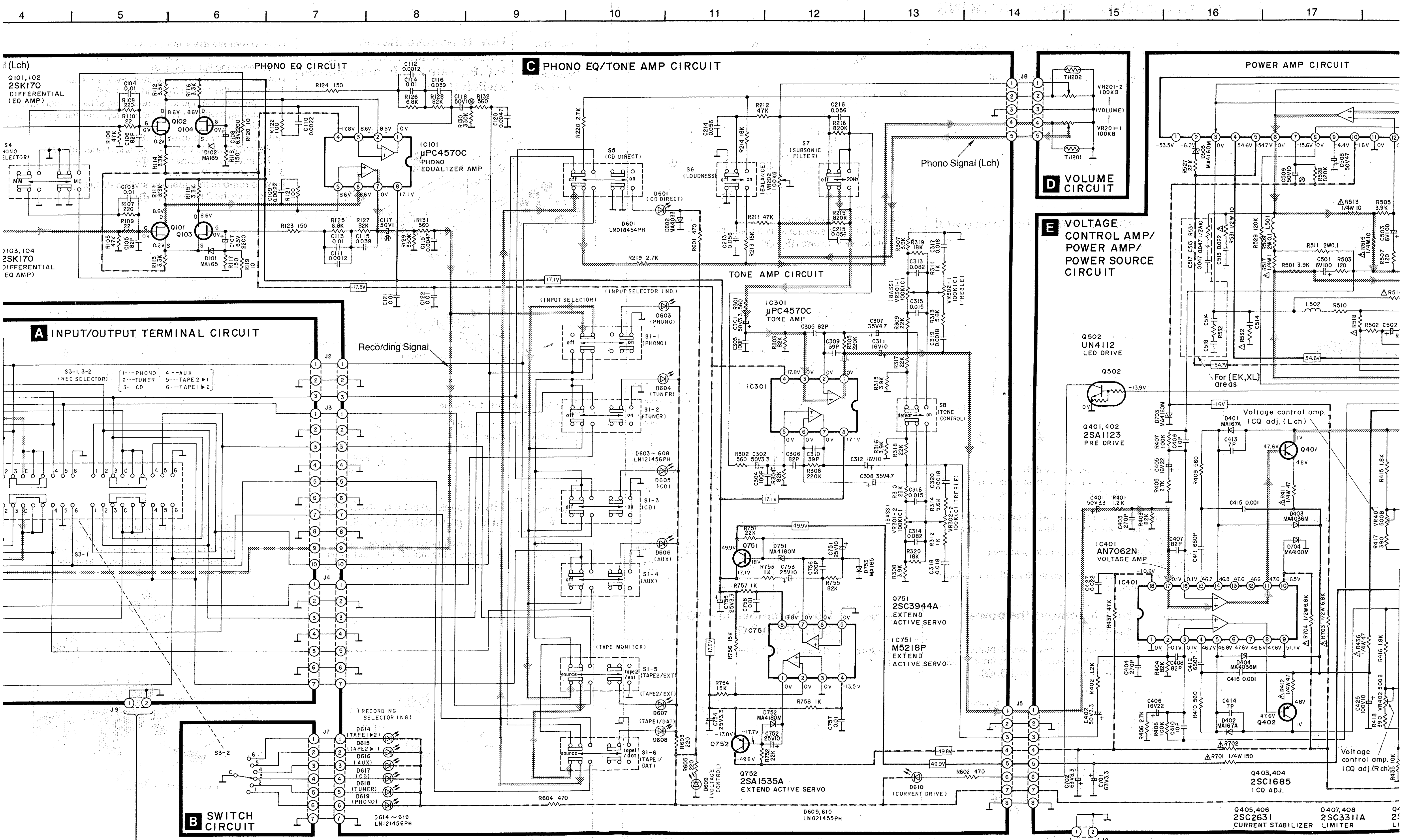
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high- impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

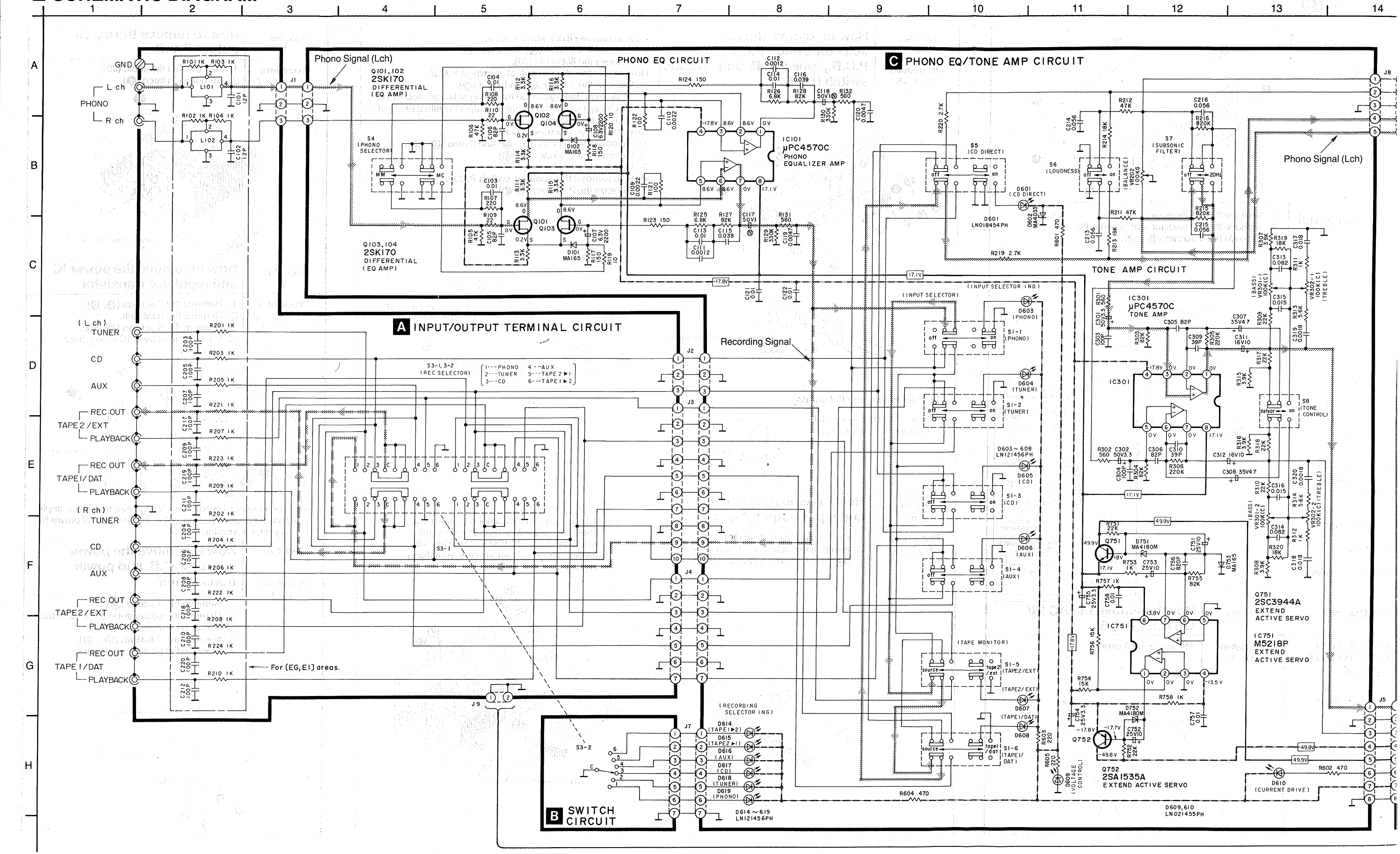
***Caution!**
*IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care furing repair.
*Cover the parts boxes made of plastics with aluminum foil.
*Ground the soldering iron.
*Put a conductive mat on the work table.
*Do not touch the legs of IC or LSI with the fingers directly.

Power Source For (XA, PA, PE) areas.




PHONO EQ CIRCUIT
C PHONO EQ/TONE AMP CIRCUIT
D VOLUME CIRCUIT
E VOLTAGE CONTROL AMP/ POWER AMP/ POWER SOURCE CIRCUIT
POWER AMP CIRCUIT
A INPUT/OUTPUT TERMINAL CIRCUIT
B SWITCH CIRCUIT
TONE AMP CIRCUIT
Recording Signal
Phono Signal (Lch)
IC101 μPC4570C PHONO EQUALIZER AMP
IC301 μPC4570C TONE AMP
IC401 AN7062N VOLTAGE AMP
IC751 M5218P EXTEND ACTIVE SERVO
Q751 2SC3944A EXTEND ACTIVE SERVO
Q752 2SA1535A EXTEND ACTIVE SERVO
Q502 UN4112 LED DRIVE
Q401,402 2SA1123 PRE DRIVE
Q403,404 2SC1685 ICQ ADJ.
Q405,406 2SC2631 CURRENT STABILIZER
Q407,408 2SC3311A LIMITER
Voltage control amp, ICQ adj. (Lch)
For (EK,XL) areas.

■ SCHEMATIC DIAGRAM



ORDER NO. AD9005136S9

Service Manual

Supplement

Amplifier

SU-V650

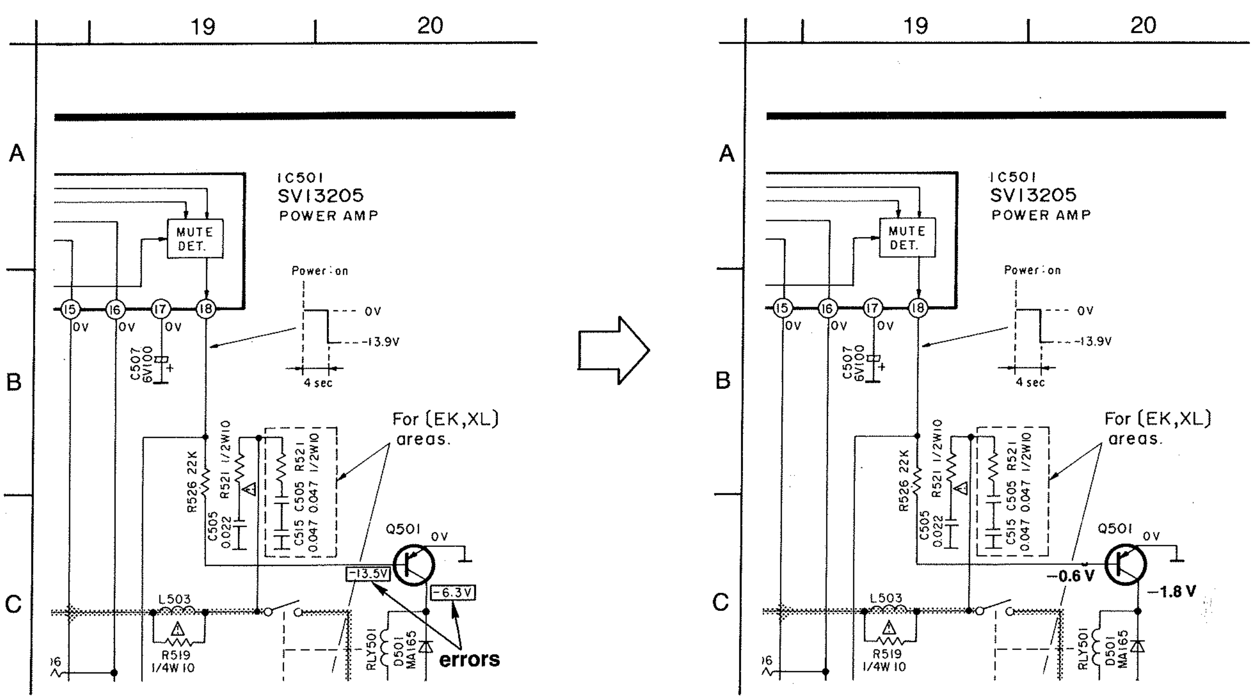
Please file and use this supplement manual together with the Service Manual for Model No. SU-V650, Order No. AD8805088C9.

Note:

- The purpose of this supplement is to correct errors in the "Schematic diagram". Please correct your service manual as follows.

CORRECTION

■ SCHEMATIC DIAGRAM (Page 11 of service manual.)



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Printed in Jar
F90050960